

What is claimed is:

1. An XY stage supported by a surface plate reference base, comprising:

a movable frame movable on said reference base along one of an X axis and a Y axis, said movable frame having a rectangular space inside thereof;

a first drive source provided in said reference base, for moving said movable frame;

a rectangular movable base mounted within said rectangular space of said rectangular movable frame, said rectangular movable base being movable on said reference base along the other of the X and Y axes and stopped on said reference base; and

a second drive source provided in said movable frame, for moving said movable base.

2. The XY stage as claimed in claim 1, further comprising a fine elevation mechanism for floating said movable base from said surface of said reference base when said movable base is moved and making said movable base in contact with said surface of said reference base when said movable base is stopped.

3. The XY stage as claimed in claim 2, wherein said reference base is formed of stone and a surface of said movable base, which is in contact with said reference base, is surface-plate finished.

4. The XY stage as claimed in claim 3, wherein said movable base is supported by said reference base through a bearing means.

5. The XY stage as claimed in claim 4, wherein said movable frame is rectangular in plan view and said bearing means has a

fixed side member, a movable side member and a ball bearing having bearing balls between said fixed side member and said movable side member.

6. The XY stage as claimed in claim 5, wherein said fixed side member of said bearing means is rigidly integrated with said movable member thereof.

7. The XY stage as claimed in claim 6, wherein said movable frame is bent when said movable base floats up.

8. An XY stage as claimed in claim 3, wherein said movable frame is rectangular in plan view, a first bearing means is provided on opposing two sides of said rectangular movable frame for supporting said movable base movably, a second bearing means is provided between the other opposing two sides of said movable frame and said reference base and said first and second drive sources are linear motors, respectively.

9. The XY stage as claimed in claim 8, wherein said first bearing means has a fixed side member and a movable side member, said fixed side member of said first bearing means fixed onto a rear surface of said rectangular movable frame, said movable side member of said first bearing means fixed onto said movable base.

10. The XY stage as claimed in claim 9, wherein said first and second bearing means are ball-and-roller bearings, respectively, a movable plane of said movable base supported by said first ball-and-roller bearing is substantially the same as a movable plane of said reference base supported by said second ball-and-roller bearing.

11. The XY stage as claimed in claim 10, wherein said first ball-and-roller bearing is a ball bearing, said movable

frame is formed of a flexible material, which is bent when said movable base is separated from said reference base, movable side members and fixed side members of said ball bearings are fixed to opposing two sides of said movable base and to the other opposing two sides of said movable base, respectively, said movable base is pressed to said reference base and locked thereon by said fine elevation mechanism when said movable base is stopped, in which said fixed side members and said movable side members of said ball bearings are in contact with each other through bearing balls.

12. The XY stage as claimed in claim 2, wherein said fine elevation mechanism comprises pressing means provided in said movable frame or said reference base, for pressing said movable base toward said reference base to make said movable base in contact with said surface of said reference base to thereby lock down said movable base on said surface of said reference base, and a movable base floating mechanism for floating said movable base from said surface of said reference base against pressing force of said pressing member, said movable base being moved while supported by said reference base through said bearings.

13. The XY stage as claimed in claim 12, wherein said movable base floating mechanism is an air blow mechanism including a plurality of dispersed air blow orifices provided in said movable base or said reference base, for slightly floating said movable base by blowing air from said air blow orifices.

14. The XY stage as claimed in claim 12, wherein a gap for relieving air blown from said air blow orifices when the air blow from said air blow orifices of said movable base

floating mechanism is stopped is provided between said movable base and said reference base.

15. The XY stage as claimed in claim 12, wherein movable side members and fixed side members of said bearings are fixed on said movable base and said movable frame, respectively, to guide a movement of said movable base.

16. The XY stage as claimed in claim 12, wherein one side of said rectangular space of said movable frame is opened.

17. A head carriage having an XY stage including a movable base for supporting a magnetic head assembly or a magnetic head cartridge and a surface plate reference base, said movable base being supported by said reference base through bearings, said XY stage comprising:

- a movable frame movable on said reference base along one of an X axis and a Y axis, said movable frame having a rectangular space inside thereof;

- a first drive source provided in said reference base, for moving said movable frame;

- a rectangular movable base mounted within said rectangular space of said rectangular movable frame, said rectangular movable base being movable on said reference base along the other of the X and Y axes and stopped on said reference base; and

- a second drive source provided in said movable frame, for moving said movable base.

18. The head carriage as claimed in claim 17, further comprising a fine elevation mechanism for floating said movable base from said surface of said reference base when said movable base is moved and making said movable base in contact with said surface of said reference base when said

movable base is stopped.

19. The magnetic head tester for testing a magnetic head by using a head carriage including an XY stage including a movable base for supporting a magnetic head assembly or a magnetic head cartridge and a surface plate reference base, said movable base being supported by said reference base through bearings, said XY stage comprising:

a movable frame movable on said reference base along one of an X axis and a Y axis, said movable frame having a rectangular space inside thereof;

a first drive source provided in said reference base, for moving said movable frame;

a rectangular movable base mounted within said rectangular space of said rectangular movable frame, said rectangular movable base being movable on said reference base along the other of the X and Y axes and stopped on said reference base; and

a second drive source provided in said movable frame, for moving said movable base.

20. The magnetic head tester as claimed in claim 19, further comprising a fine elevation mechanism for floating said movable base from said surface of said reference base when said movable base is moved and making said movable base in contact with said surface of said reference base when said movable base is stopped.

21. A magnetic disk tester for testing a magnetic disk by using a head carriage including an XY stage including a movable base for supporting a magnetic head assembly or a magnetic head cartridge and a surface plate reference base, said movable base being supported by said reference base

through bearings, said XY stage comprising:

a movable frame movable on said reference base along one of an X axis and a Y axis, said movable frame having a rectangular space inside thereof;

a first drive source provided in said reference base, for moving said movable frame;

a rectangular movable base mounted within said rectangular space of said rectangular movable frame, said rectangular movable base being movable on said reference base along the other of the X and Y axes and stopped on said reference base; and

a second drive source provided in said movable frame, for moving said movable base.

22. The magnetic disk tester as claimed in claim 21, further comprising a fine elevation mechanism for floating said movable base from said surface of said reference base when said movable base is moved and making said movable base in contact with said surface of said reference base when said movable base is stopped.